

Flu Watch

Week Ending January 5, 2013 (MMWR Week 1)

All data are provisional and may change as more reports are received.

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MMWR Week 1 at a Glance:
<p>Influenza Activity Level: WIDESPREAD Note: Activity level definitions are found on page 15</p> <p>ILI Activity Status (South Carolina baseline is 2.05%*): Below baseline in the Upstate (1.75%) and in the Midlands (1.89%). Above baseline along the Coast (4.16%). The state ILI percentage was 2.12%. These data reflect reports from 15 (46.9%) providers.</p> <p>SC Viral Isolate and RT-PCR Activity: 77 positive specimens were reported. Since 9/30/12, 620 positive specimens have been reported.</p> <p>Positive Rapid Flu Test Activity: 3009 positive rapid tests were reported. Since 9/30/12, 35,830 positive rapid tests have been reported.</p> <p>Hospitalizations: 198 lab confirmed hospitalizations were reported. Since 9/30/12, 1084 hospitalizations have been reported.</p> <p>Deaths: Three lab confirmed deaths were reported. Since 9/30/12, 22 deaths have been reported.</p>

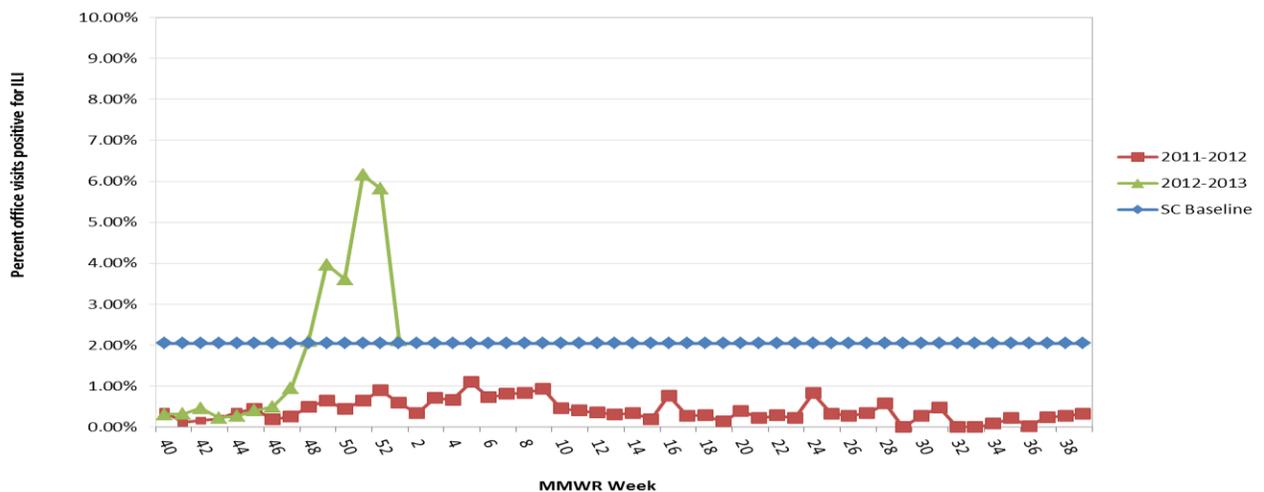
Summary of ILI Activity, Positive Confirmatory Tests, and Influenza Associated Hospitalizations and Deaths

	<i>Current week</i>	<i>Previous week</i>	<i>Change from previous week</i>
Percent of ILI visits reported by ILINet providers	2.12%	5.82%	▼ 3.7
Number of positive confirmatory tests	77	70	▲ 7
Number of lab confirmed flu hospitalizations	198	229	▼ 31
Number of lab confirmed flu deaths	3	3	0

I. ILINet Influenza-Like Illness Surveillance

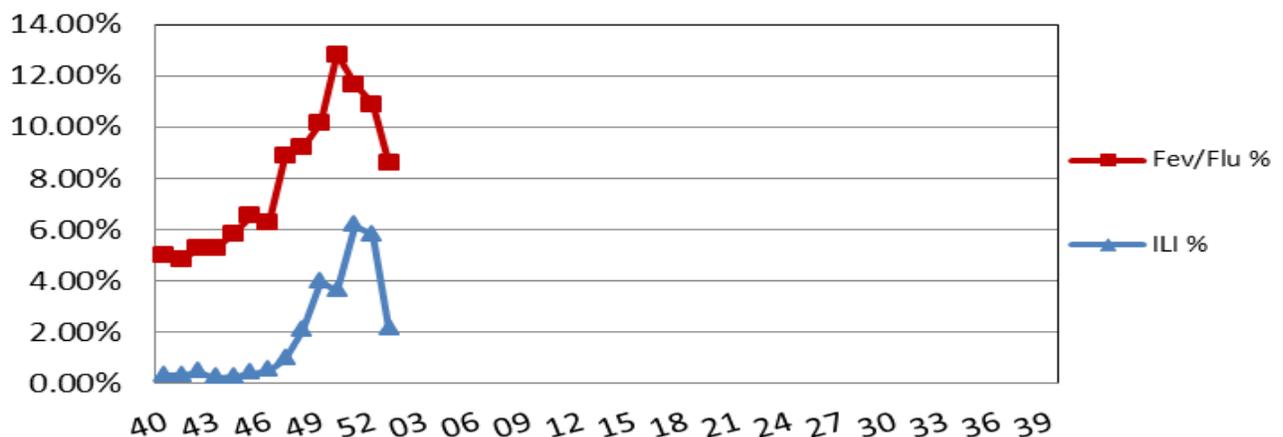
During the most recent MMWR week, 2.12% of patient visits to SC ILINet providers were due to ILI. This is above the state baseline (2.05%). This ILI percentage compares to .59% this time last year. Reports were received from providers in 12 counties, representing 7 of the 8 regions.

**Percentage of Visits for Influenza-like Illness (ILI) Reported by Sentinel Providers in South Carolina
2011-2012 and 2012-2013 Influenza Seasons**



*The SC baseline is the mean percentage of patient visits for ILI during non-influenza weeks (weeks when percent of positive lab tests was below 20%) for the previous three seasons plus two standard deviations.

**SC Fever Flu Percentage Compared to ILI Percentage
September 30, 2012 - January 5, 2013**

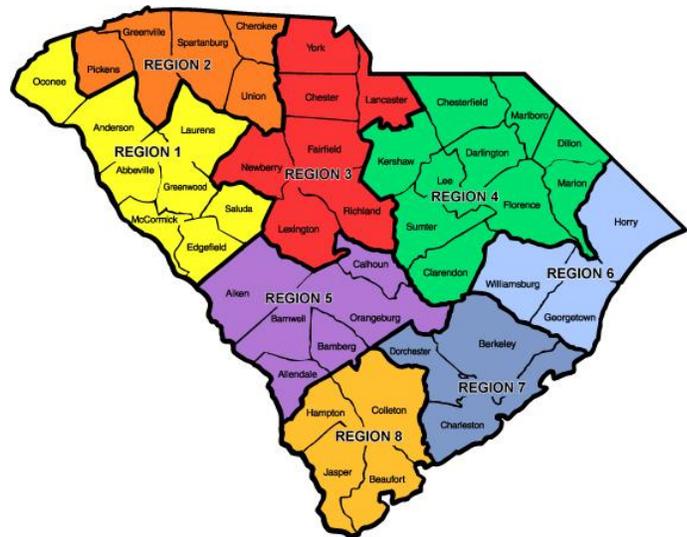


*Only includes hospitals participating in SC syndromic surveillance

Influenza-Like Illness Reported by Sentinel Providers December 30, 2012 – January 5, 2013

County	ILI %	County	ILI %
Abbeville	---	Greenwood	NR
Aiken	2.36%	Hampton	1.60%
Allendale	---	Horry	NR
Anderson	NR	Jasper	NR
Bamberg	---	Kershaw	.99%
Barnwell	---	Lancaster	---
Beaufort	NR	Laurens	NR
Berkeley	NR	Lee	---
Calhoun	---	Lexington	9.00%
Charleston	NR	Marion	---
Cherokee	---	Marlboro	---
Chester	---	McCormick	NR
Chesterfield	---	Newberry	---
Clarendon	---	Oconee	---
Colleton	---	Orangeburg	---
Darlington	---	Pickens	0%
Dillon	NR	Richland	1.03%
Dorchester	NR	Saluda	0%
Edgefield	---	Spartanburg	.35%
Fairfield	---	Sumter	NR
Florence	1.41%	Union	---
Georgetown	5.67%	Williamsburg	---
Greenville	1.98%	York	0%

NR: No reports received
 ---: No enrolled providers



Geographic Region	ILI %	# of Reporters
Upstate-Regions 1 -2	1.75	6
Midlands-Regions 3-5	1.89	7
Coastal-Regions 6-8	4.16	2

*County ILI percentages are affected by the number of reporting providers within that county.

II. Virologic Surveillance

<i>Positive confirmatory influenza test results* Current MMWR Week (12/30/12 – 1/5/13)</i>		
	BOL	Other clinical labs
Number of specimens tested	40	NA
Number of positive specimens	24	53
Influenza A unsubtype		6
Influenza A H1N1		
Influenza A H3N2	23	45
Influenza B	1	2
Other		

Includes culture, RT-PCR, DFA, and IFA

During the previous MMWR week, 77 positive specimens were reported.

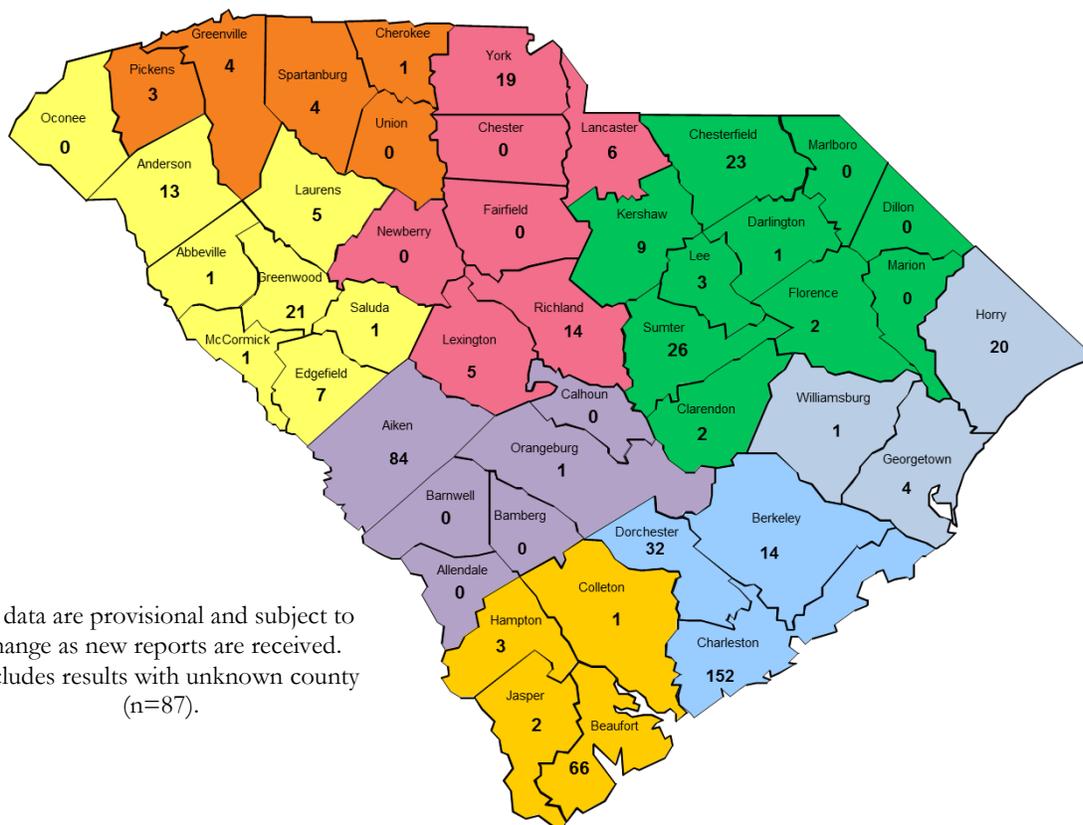
<i>Positive confirmatory influenza test results* Cumulative (09/30/12 – 1/5/13)</i>		
	BOL	Other clinical labs
Number of specimens tested	285	NA
Number of positive specimens	190 (77.6%)	430
Influenza A unsubtype		203 (47.2%)
Influenza A H1N1	13 (6.8%)	5 (1.2%)
Influenza A H3N2	166 (87.4%)	211 (49.1%)
Influenza B	11 (5.8%)	11 (2.6%)
Other		

Includes culture, RT-PCR, DFA, and IFA

**Positive Confirmatory Tests by County
Current Week 12/30/12 – 1/5/13**

County	Positive Tests	County	Positive Tests	County	Positive Tests
Abbeville		Dillon		Marion	
Aiken		Dorchester	5	Marlboro	
Allendale		Edgefield		McCormick	
Anderson	2	Fairfield		Newberry	
Bamberg		Florence	1	Oconee	
Barnwell		Georgetown	1	Orangeburg	
Beaufort	17	Greenville	2	Pickens	1
Berkeley	1	Greenwood	1	Richland	
Calhoun		Hampton		Saluda	
Charleston	37	Horry	1	Spartanburg	1
Cherokee		Jasper		Sumter	2
Chester		Kershaw	5	Union	
Chesterfield		Lancaster		Williamsburg	
Clarendon		Laurens		York	
Colleton		Lee		Unknown	
Darlington		Lexington			

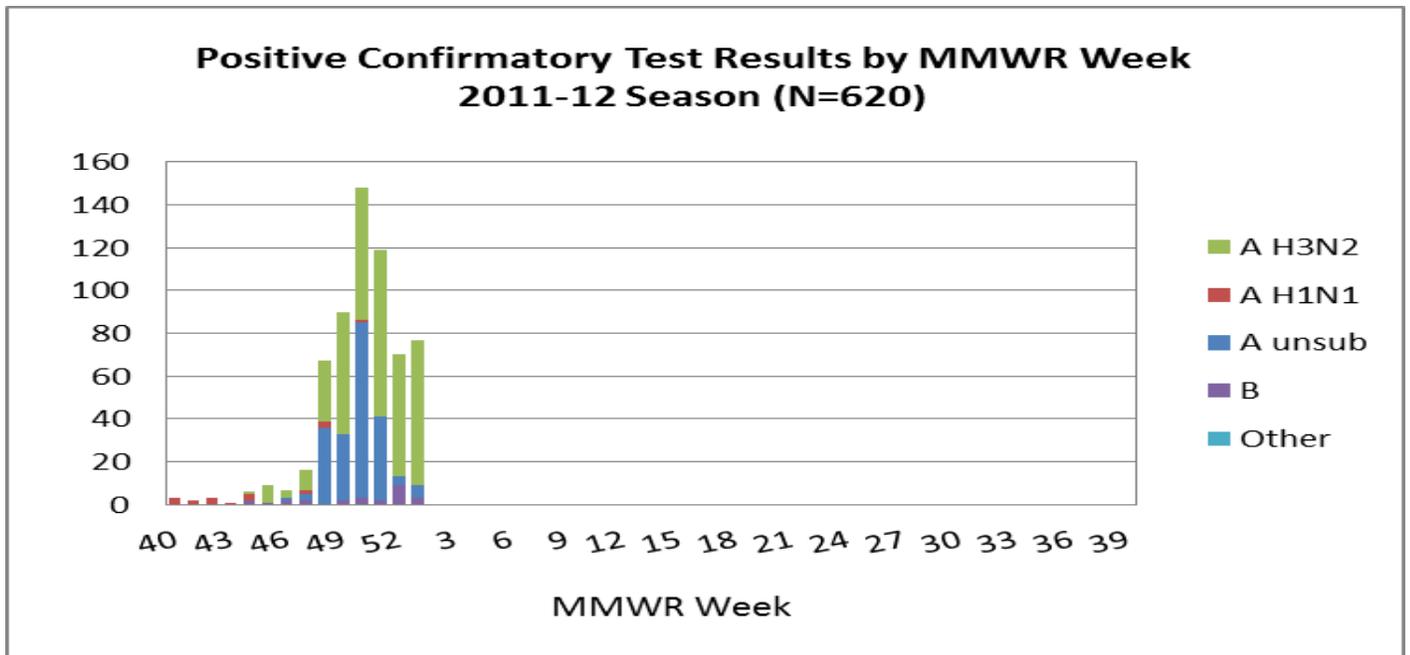
**Map of Positive Confirmatory Tests by County
Cumulative 09/30/12 – 1/5/13**



All data are provisional and subject to change as new reports are received. Excludes results with unknown county (n=87).

**Positive Confirmatory Tests by County and Type
Cumulative 9/30/12 – 1/5/13**

	A H1N1	A H3N2	B	A Unsub	Unk		A H1N1	A H3N2	B	A Unsub	Unk
Region 1						Region 2					1
Abbeville		1				Cherokee					
Anderson		8		5		Greenville		2		3	
Edgefield		1		6		Pickens		3			
Greenwood		19		2		Spartanburg		1		3	
Laurens		2		3		Union					
McCormick		1				Region 4					
Oconee						Chesterfield		1	1	1	
Saluda		1				Clarendon		1		1	
Region 3						Darlington		1			
Chester						Dillon					
Fairfield						Florence		1		1	
Lancaster		3		2		Kershaw		7		2	
Lexington		4				Lee		2		1	
Newberry						Marion					
Richland		9	2	3		Marlboro					
York		9	2	8		Sumter		23	1		
Region 5						Region 6					
Aiken	1	3	1	74		Georgetown		4			
Allendale						Horry		16		4	
Bamberg						Williamsburg				1	
Barnwell						Region 8					
Calhoun						Beaufort	15	48	3		
Orangeburg		1				Colleton					
Region 7						Hampton		1		3	
Berkeley		14				Jasper		2			
Charleston		141	7	4		Unknown	2	15	2	68	
Dorchester		31	1								

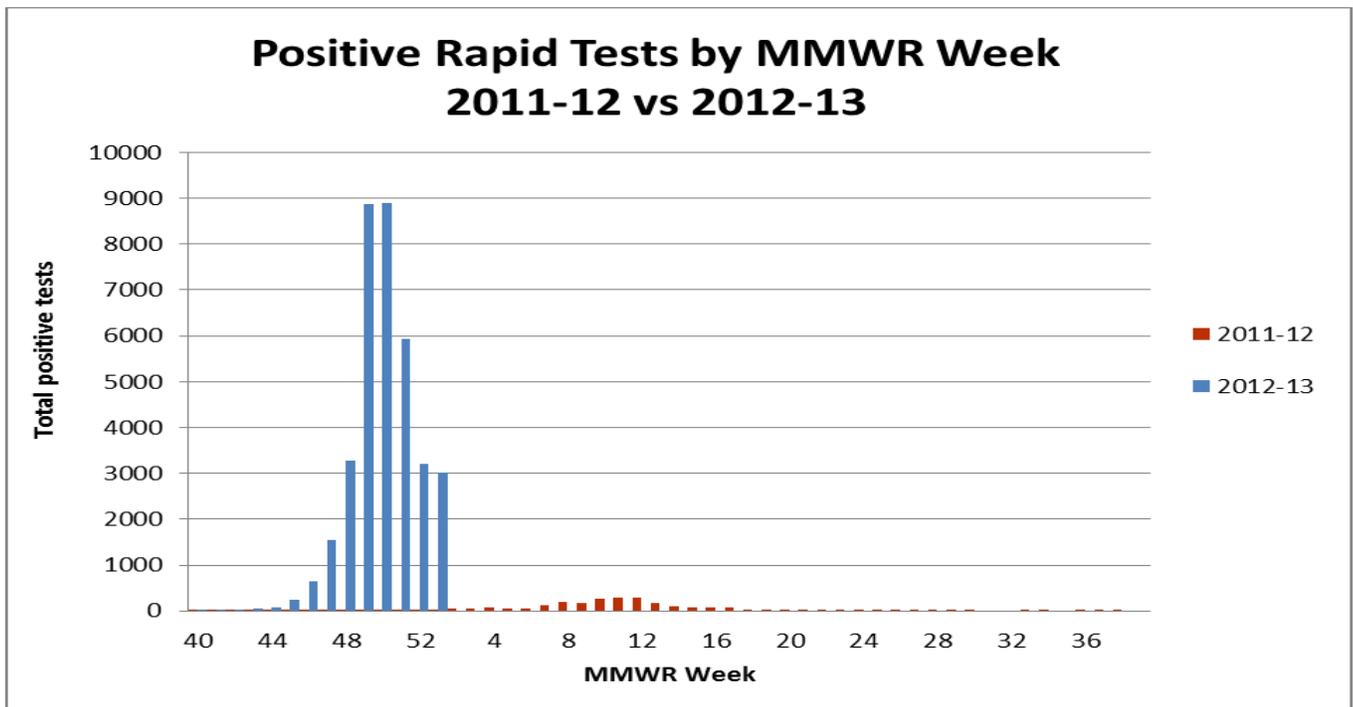


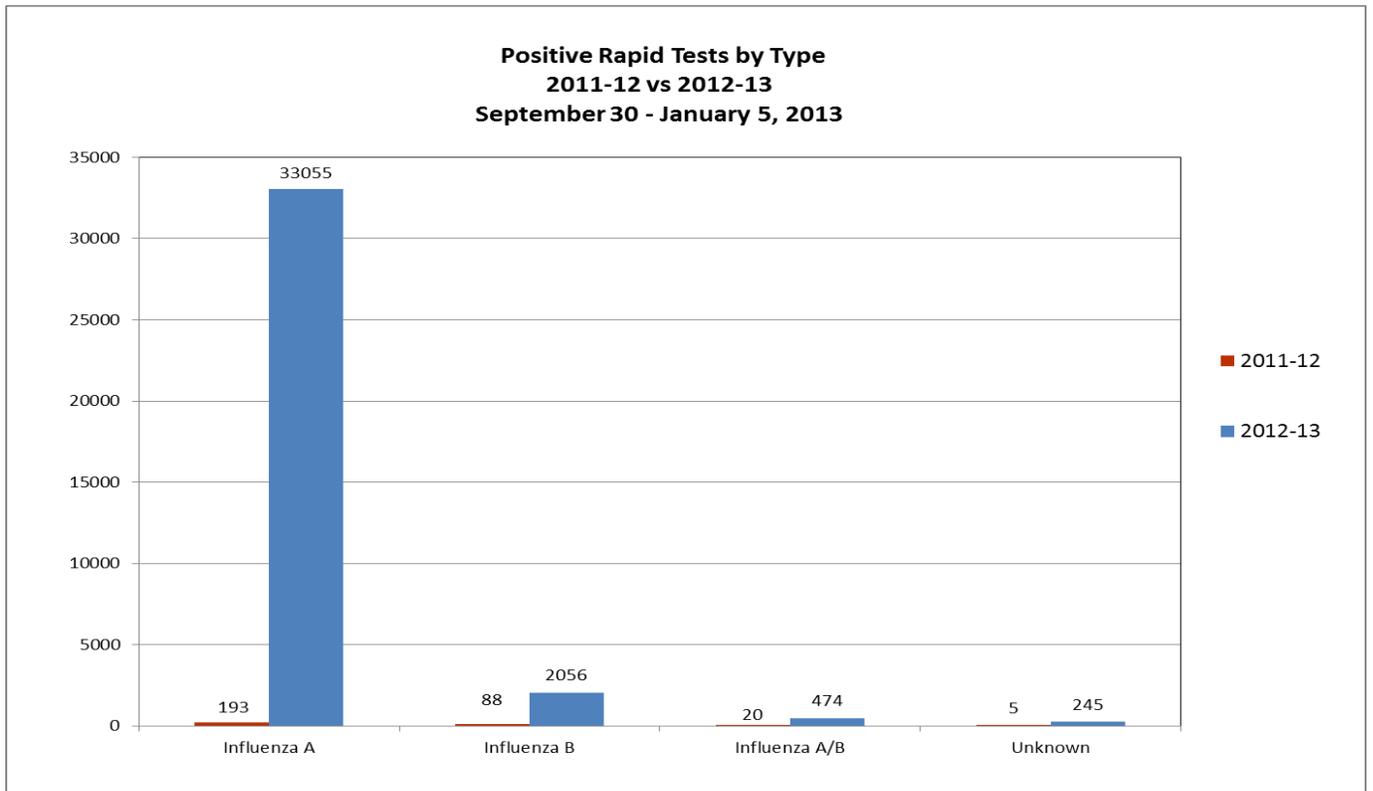
III. Positive Rapid Antigen Tests

During the past MMWR week, 3009 positive rapid antigen tests were reported. Of these, 2687 were influenza A, 263 were influenza B, 39 were influenza A/B, and 20 were unknown. This compares to 37 this time last year. 35,830 positive rapid tests have been reported this year.

Positive Rapid Flu Tests by County December 30, 2012 – January 5, 2013

County	Positive Tests	County	Positive Tests	County	Positive Tests
Abbeville	8	Dillon		Lexington	166
Aiken	20	Dorchester	94	Marion	49
Allendale	3	Edgefield	10	Marlboro	14
Anderson	67	Fairfield	12	McCormick	
Bamberg		Florence	166	Newberry	36
Barnwell	3	Georgetown	159	Oconee	14
Beaufort	86	Greenville	270	Orangeburg	
Berkeley	31	Greenwood	56	Pickens	54
Calhoun		Hampton	10	Richland	262
Charleston	552	Horry	211	Saluda	
Cherokee	18	Jasper	4	Spartanburg	145
Chester	20	Kershaw	47	Sumter	80
Chesterfield		Lancaster	40	Union	4
Clarendon	19	Laurens	20	Williamsburg	4
Colleton	19	Lee		York	159
Darlington	77				





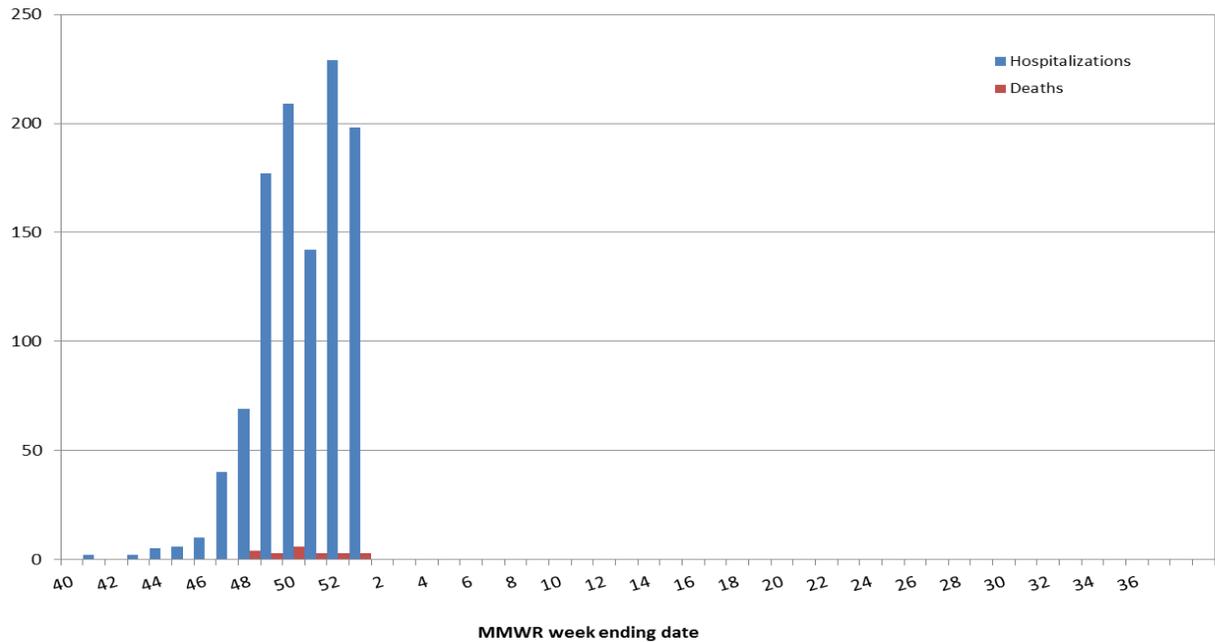
IV. Influenza hospitalizations and deaths

During the past MMWR week, 198 lab confirmed* influenza hospitalizations were reported. Three lab confirmed deaths were reported.

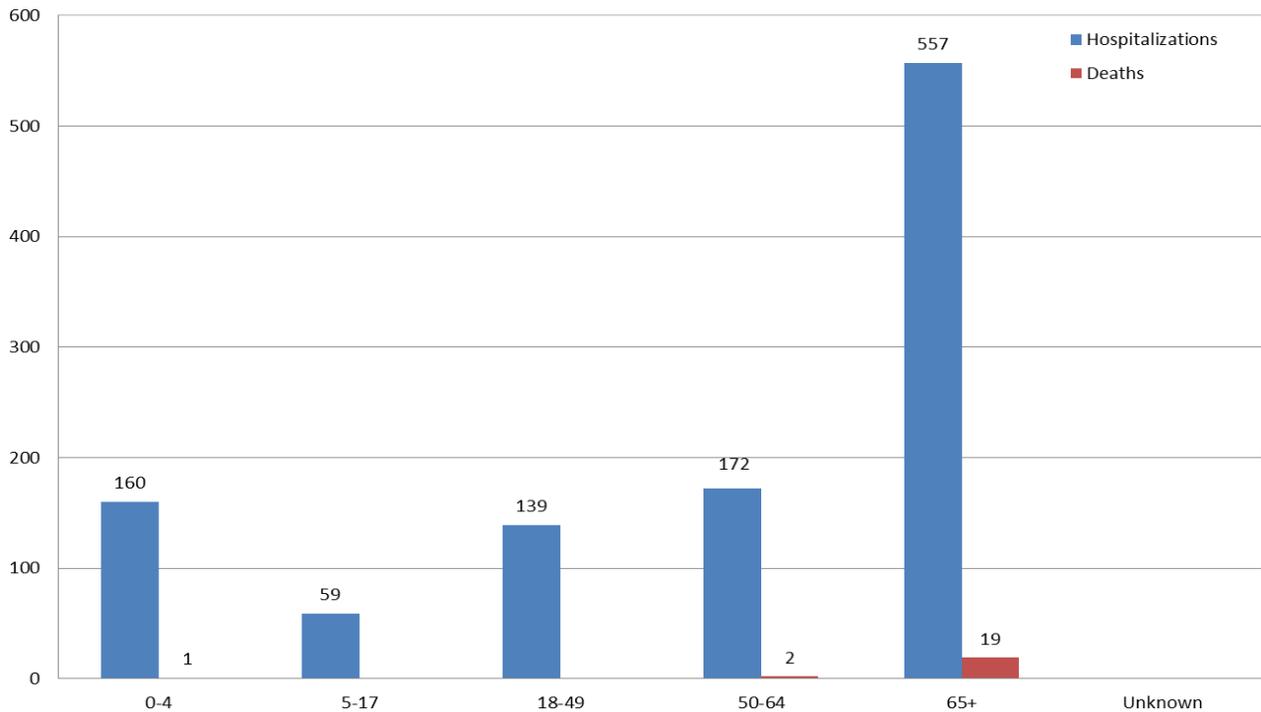
	Total number*	
Number of Reporting Hospitals (Current week)	50	
	<i>Current MMWR Week (12/30-1/5/13)</i>	<i>Cumulative (since 09/30/12)</i>
Hospitalizations	198	1087
Deaths	3	22

*These data are provisional. Lab confirmation for hospitalizations and deaths includes culture, PCR, DFA, IFA, and rapid test.

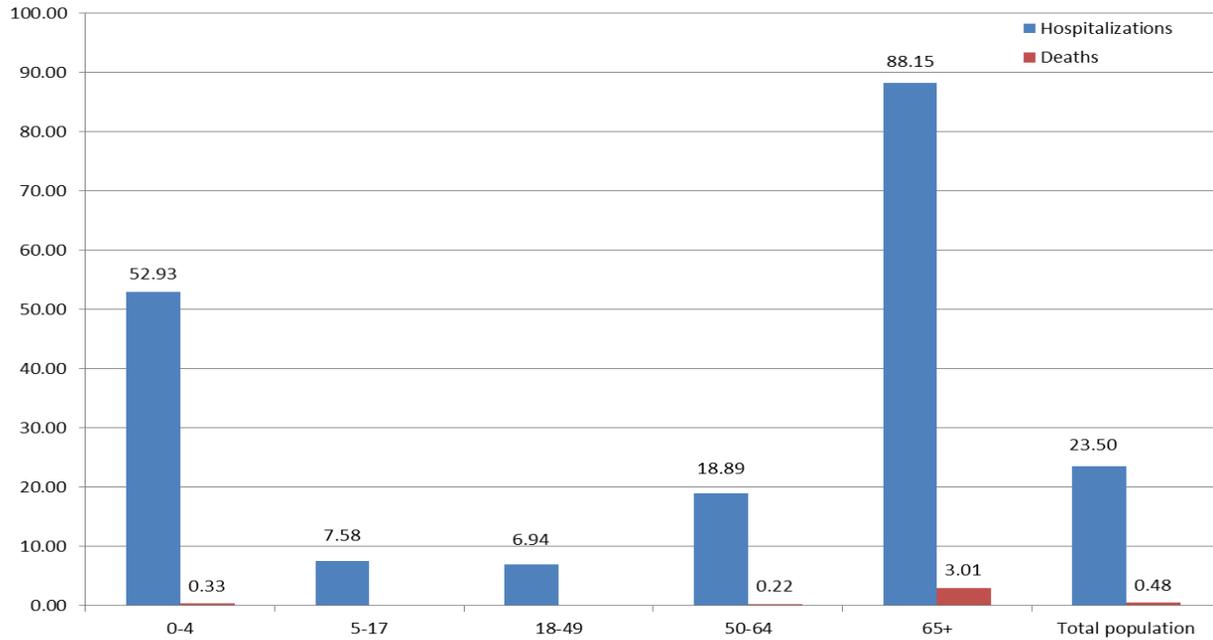
**Reported Cases of Laboratory Confirmed Influenza Hospitalizations and Deaths
by MMWR week
September 30, 2012 - January 5, 2013**



**Reported Cases of Laboratory Confirmed Influenza
Hospitalizations (n=1087) and Deaths (n=22)
September 30 - January 5, 2012**



**Laboratory Confirmed Influenza Case rate/100,000
Hospitalizations (n=1084) and Deaths (n=22) by age group
September 30, 2012 - January 5, 2012**

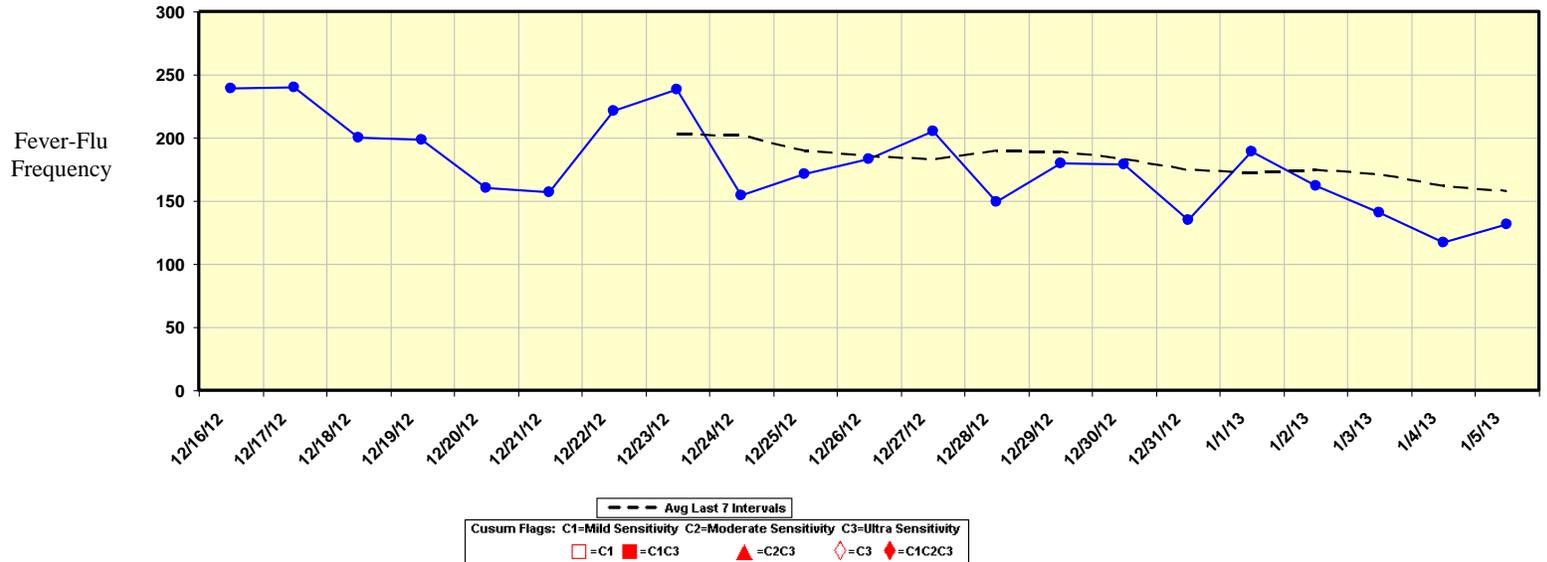


Lab Confirmed Influenza Deaths by County
September 30, 2012 – January 5, 2013

County	Number of Deaths
Aiken	2
Barnwell	1
Beaufort	1
Charleston	1
Clarendon	1
Greenville	3
Jasper	1
Lexington	3
McCormick	1
Oconee	2
Pickens	2
Richland	2
York	2
Total	22



Statewide - Fever Flu Syndrome



Cumulative Sums Analysis (CUSUM):

- C1 = Flags because of sharp rise in counts from 1 day to the next
- C2 = Flags because of aberrant, initial, rapid rise in counts and peak in counts
- C3 = Flags because of a gradual rise in counts over a short time

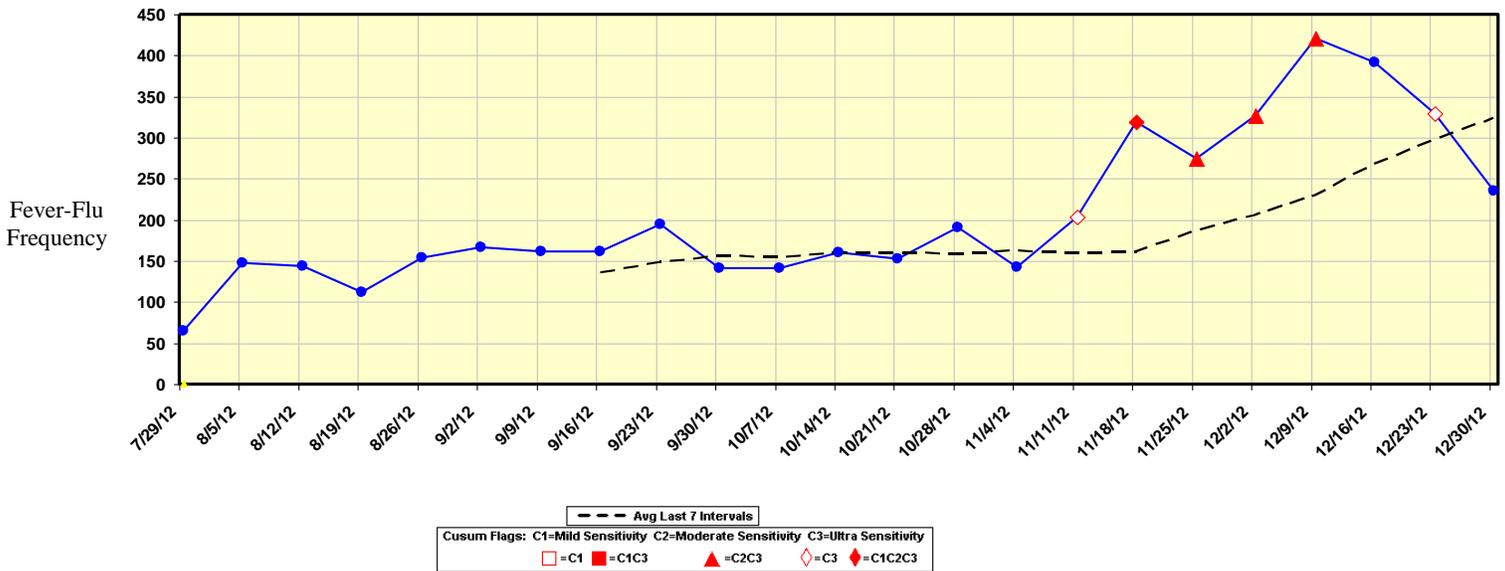
The SC Statewide Fever-Flu Syndrome graph above illustrates the daily counts of hospital emergency department (ED) visits with an Influenza-like Illness (ILI) for the past 21 days. A total of **21 hospital** facilities are reporting to the SC-DARTS system. These 21 include: AnMed Health (Region 1); Self Regional (Region 1); Oconee Medical Center (Region 1); Palmetto Health Alliance (Region 2 & 3); Greenville Hospital System (Region 2); Kershaw Health (Region 4); McLeod Health (Region 4); Elgin Urgent Care (Region 4); Medical University of South Carolina (Region 7); Roper (Region 7); St. Francis (Region 7); Trident (Region 7); Colleton (Region 8); and Hampton Regional (Region 8).

Statewide CUSUM Flag Alerts Description:

No flags for the past week.

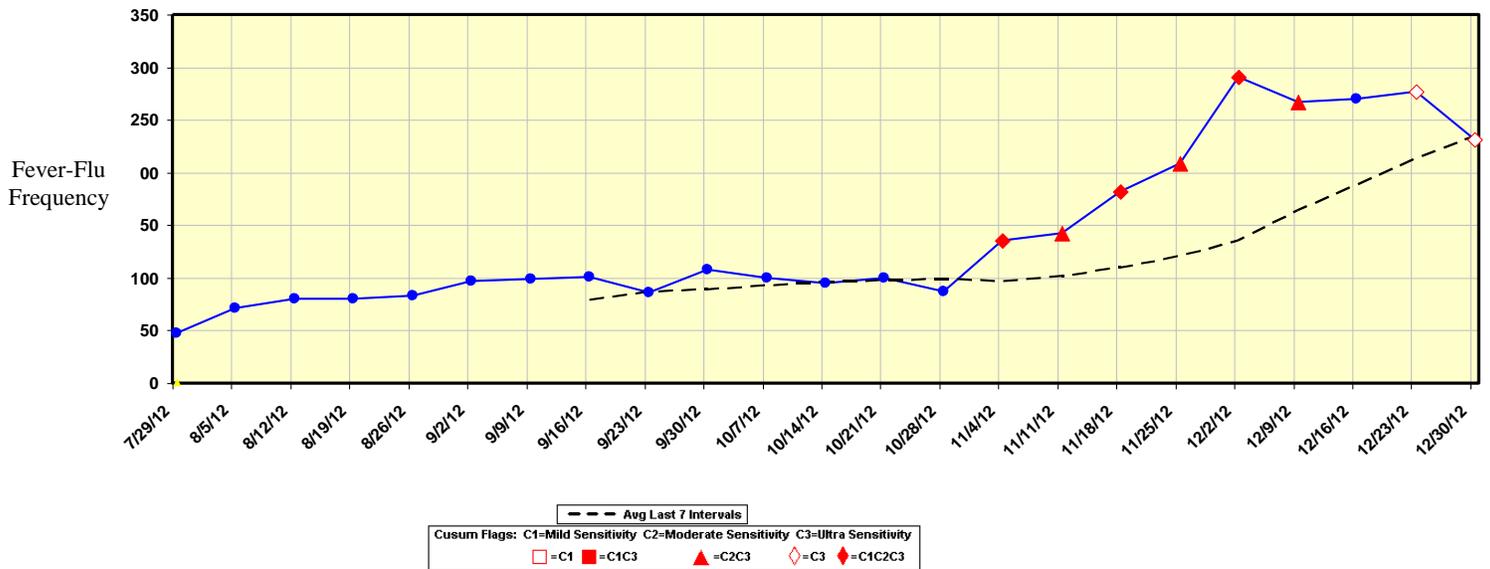
Below are the fever-flu syndrome graphs by Region for the past 180 days (weekly interval).

Region 1 - Fever Flu Syndrome



Region1 Hospitals (# of Facilities): AnMed Health (3); Self-Regional (1); Oconee Medical Center (1);

Region 2 - Fever Flu Syndrome



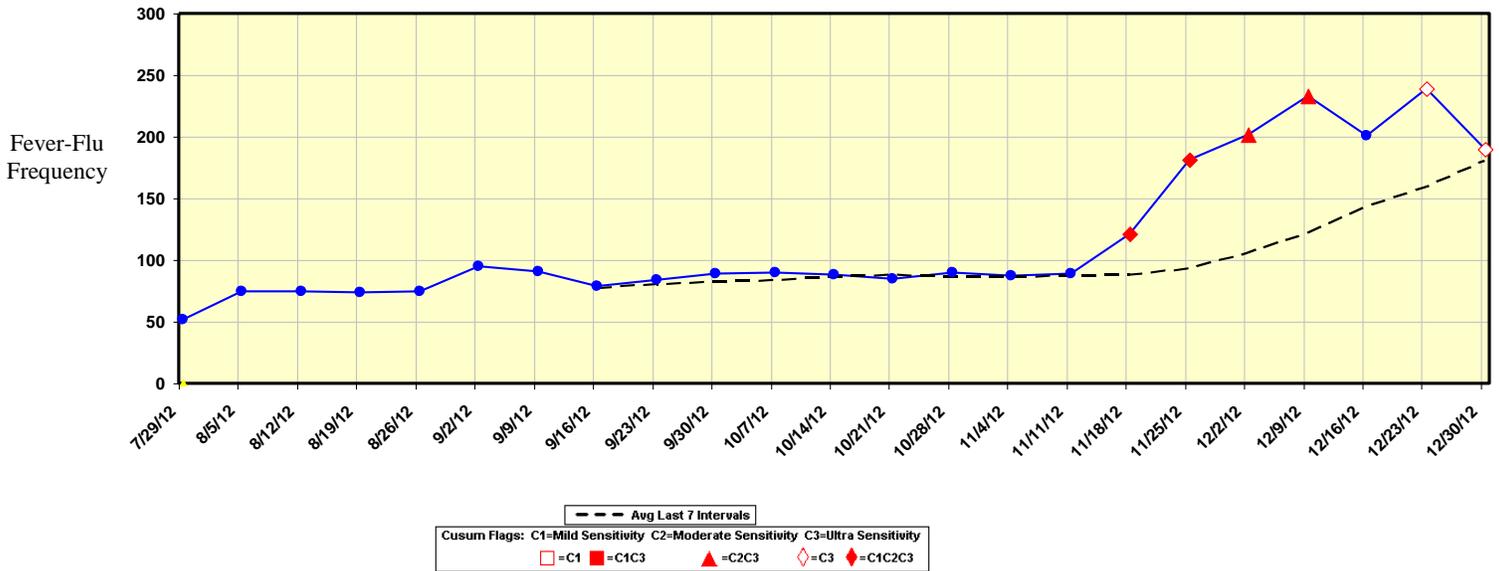
Region 2 Hospitals (# of Facilities): Greenville Hospital System (4); Palmetto Health Easley (1)

Region 3 - Fever Flu Syndrome



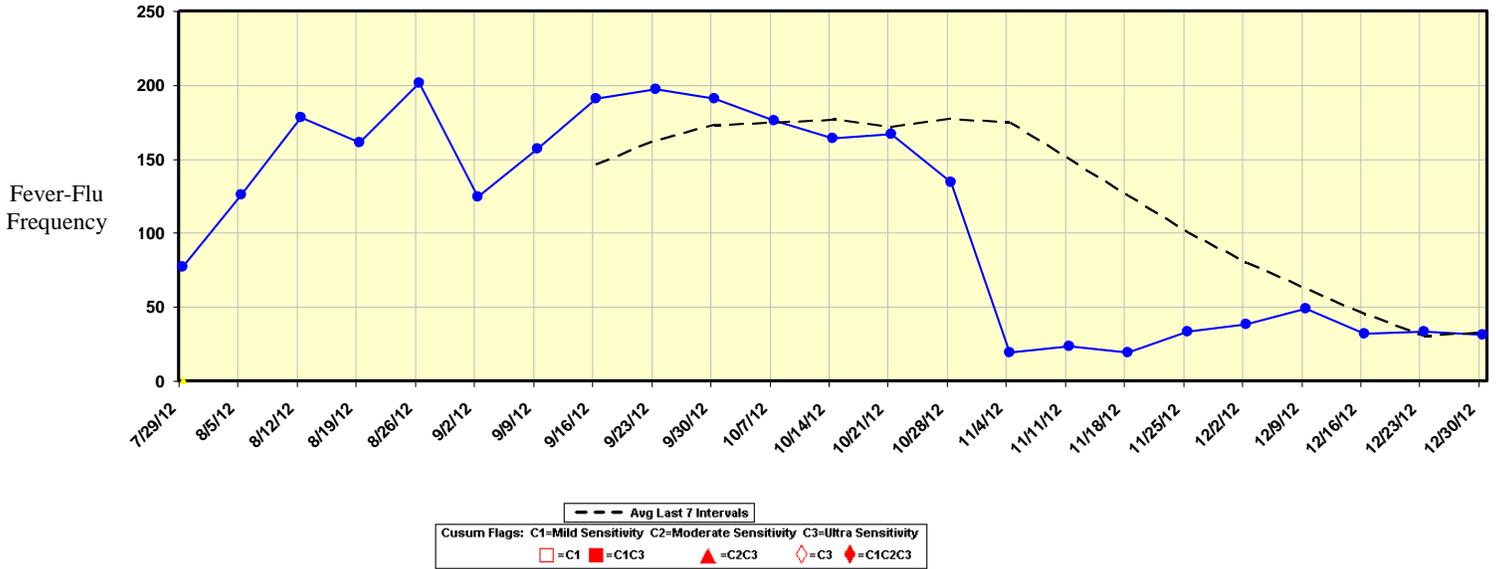
Region 3 Hospitals (# of Facilities): Palmetto Health Baptist (1), Palmetto Health Richland (1)

Region 4 - Fever Flu Syndrome



Region 4 Hospitals (# of Facilities): Kershaw Health (1); McLeod Health (1); Elgin Urgent Care (1)

Region 7 - Fever Flu Syndrome



Region 7 Hospitals (# of Facilities): Medical University of South Carolina (1), Roper (1), St. Francis (1), Trident (1)

Region 8 - Fever Flu Syndrome



Region 8 Hospitals (# of Facilities): Hampton Regional (1), Colleton (1)

VI. Influenza activity levels

Activity Level	ILI activity/Outbreaks		Laboratory data
No activity	Low	And	No lab confirmed cases
Sporadic	Not increased	And	Isolated lab-confirmed cases
	OR		
Local	Not increased	And	Lab confirmed outbreak in one institution
	Increased ILI in 1 region; ILI activity in other regions is not increased	And	Recent (within the past 3 weeks) lab evidence of influenza in region with increased ILI
	OR		
Regional	2 or more institutional outbreaks (ILI or lab confirmed) in 1 region; ILI activity in other regions is not increased	And	Recent (within the past 3 weeks) lab evidence of influenza in region with the outbreaks; virus activity is no greater than sporadic in other regions
	Increased ILI in 2-3 regions	And	Recent (within the past 3 weeks) lab confirmed influenza in the affected regions
Widespread	OR		
	Institutional outbreaks (ILI or lab confirmed) in 2-3 regions	And	Recent (within the past 3 weeks) lab confirmed influenza in the affected regions
Widespread	Increased ILI and/or institutional outbreaks (ILI or lab confirmed) in at least 4 of the regions	And	Recent (within the past 3 weeks) lab confirmed influenza in the state.
	OR		

VII. South Carolina Influenza Surveillance Components

South Carolina influenza surveillance consists of mandatory and voluntary reporting systems for year-round influenza surveillance. These networks provide information on influenza virus strain and subtype and influenza disease burden.

Mandatory Reporting

Positive confirmatory test reporting

Positive influenza culture, PCR, DFA, and IFA results from commercial laboratories should be reported to DHEC within 7 days electronically via CHESS or using a DHEC 1129 card.

Positive rapid antigen test reporting

Summary numbers of positive rapid influenza tests and influenza type identified should be sent to the regional health department by fax or email before noon on Monday for the preceding week.

Influenza death reporting

Lab confirmed influenza deaths in adults should be reported to DHEC within 7 days. Lab confirmed influenza deaths in children under age 18 should be reported within 24 hours. These include results from viral culture, PCR, rapid flu tests, DFA, IFA or autopsy results consistent with influenza. Hospitals should report deaths to their regional health department by noon on Monday for the preceding week.

Influenza hospitalizations

DHEC requires weekly submission of laboratory confirmed influenza hospitalizations. Hospitals should report these to their regional health department by noon on Monday for the preceding week.

For additional information about ILINet or to become an ILINet provider, contact the Acute Disease Epidemiology influenza surveillance coordinator at springcb@dhec.sc.gov.

Voluntary Networks

Influenza-Like Illness (ILINet) Sentinel Providers Network

ILINet focuses on the number of patients presenting with influenza-like symptoms in the absence of another known cause. ILI is defined as fever (temperature of $U \geq U100^{\circ}F$) plus a cough and/or a sore throat in the absence of another known cause. Providers submit weekly reports to the CDC of the total number of patients seen in a week and the subset number of those patients with ILI symptoms by age group.

South Carolina Disease Alerting, Reporting & Tracking System (SC-DARTS)

SC-DARTS is a collaborative network of syndromic surveillance systems within South Carolina. Currently our network contains the following data sources: SC Hospital Emergency Department (ED) chief-complaint data, Poison Control Center call data, Over-the-Counter (OTC) pharmaceutical sales surveillance, and CDC's BioSense Biosurveillance system. The hospital ED syndromic surveillance system classifies ED chief complaint data into appropriate syndrome categories (ex: Respiratory, GI, Fever, etc.). These syndrome categories are then analyzed using the cumulative sum (CUSUM) methodology to detect any significant increases. Syndromic reports are distributed back to the hospital on a daily basis.

To join the SC-DARTS system or for more information, please contact: **Alecia Alianell at 803-898-0269 or alianeat@dhec.sc.gov**.

